

Work Order ID 146235

Friday, May 13, 2016 11:25:15 AM

146235

Page 1

Item ID: 647.3903 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Deflector Assembly
 Start Date: 5/16/2016 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 5/19/2016 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: dem Date: 16/05/13 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
647.3900	C1

110	Pick Kit	0.00						DAS 6	
110									
Packaging	Memo	0.02							
Packaging									

120		0.00							
120									
Small Fab	Memo	0.25							
Small Fab	Assemble as per dwg and apply loctite 598 on all faying surfaces per note.								
	A/R RTV LOCTITE 598: <u>M134524</u>								
	exp. date: <u>09/17</u>								

130	QC5- Inspect part completeness to step on W/O	0.00							
130									
QC	Memo	0.02							
Quality Control									

DAS
36
9-89

DAS
38
9-89
JUN 07 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 146235

Friday, May 13, 2016 11:25:15 AM

146235

Page 2

Item ID: 647.3903

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Deflector Assembly

Start Date: 5/16/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 5/19/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Identify as per dwg & Stock Location: <u>CC6021</u>	0.00							
140									
Packaging	Memo	0.02							
Packaging	***IDENTIFY AS PER IAW MPP-120***								
150	QC21- Final Inspection - Work Order Release	0.00							
150									
QC	Memo	0.10							
Quality Control									

DAS
6
39

JUN 08 2016

MCS

JUN 08 2016

MCS

JUN 08 2016

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																											
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval																																																								
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																							
Root Cause		FAULT CATEGORY																																																													
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
																								OTHER : ☐																																							

Picklist Print

Friday, May 13, 2016 11:25:20 AM

Page 1

Work Order ID: 146235

146235

Parent Item: 647.3903

647.3903

Parent Item Name: Deflector Assembly

Start Date: 5/16/2016

Required Date: 5/19/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 14.07.21 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
647.3915 *647.3915* Deflector		Manufactured	No				Each	17.0000		<u>12</u>			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				cck053				17		<u>2</u>			
					131243			17		<u>2</u>			
647.3916 *647.3916* Deflector		Manufactured	No				Each	8.0000		<u>12</u>			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				cck023				8		<u>2</u>			
					144277			8		<u>2</u>			
647.3917 *647.3917* Doubler		Manufactured	No				Each	31.0000		<u>24</u>			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				cck111				31					
					138766			31					
CR3213-6-9 *CR3213-6-9* Cherry Rivet		Purchased	No				Each	72.0000		<u>12</u>			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				ST318				14					
					m131049			14					
				ST319				58					
					m133791			58		<u>12</u>			

MAY 25 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

 APICAL INDUSTRIES, INC. dba DART AEROSPACE	ENGINEERING CHANGE NOTICE NO. 04948				SHEET 1 OF 2	
	DWG NO. 647.3900		REV: C	PREPARED BY: M. ANDECK	DATE: 05/04/15	EFFECT ON DWG ☐ INC. ☒ UNINC.
	DWG TITLE: DEFLECTORS					
	APPROVED BY:	ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: CURRENT ORDER	
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REVISED TOLERANCE AND NOTES				ECR: D-15-01

NOTES:

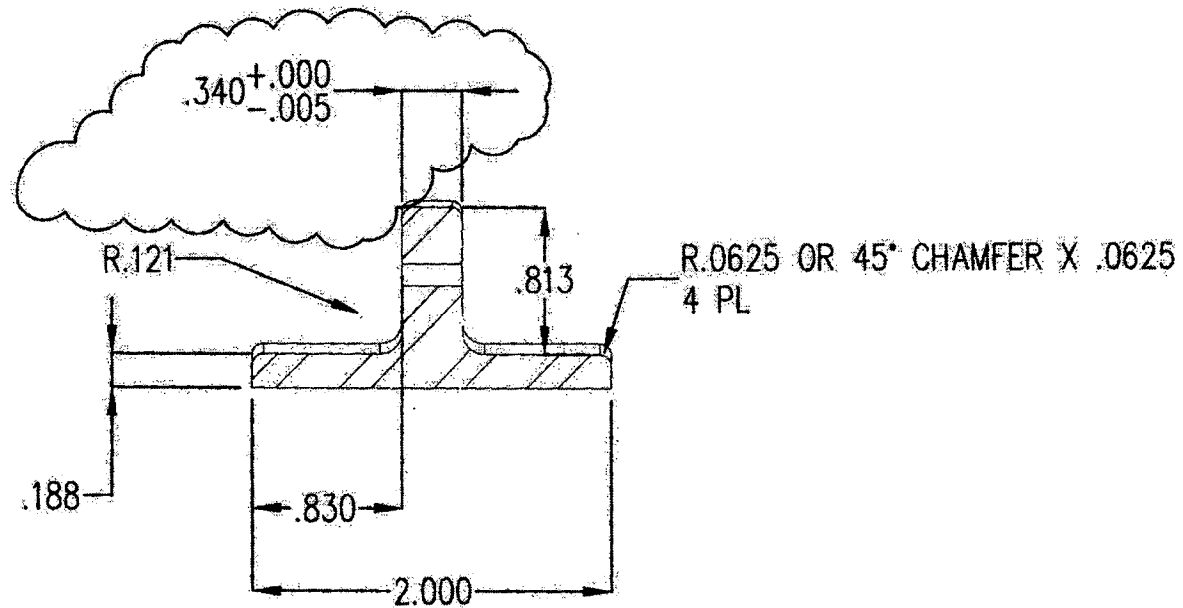
- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 APPLY F/N 3 AS REQUIRED TO ALL FAYING SURFACES OF F/N 6, 7 & 8 UPON ASSY.
- 6 MAXIMUM OR MINIMUM DIMENSION AFTER FINISH.
7. .0625 HOLE MAY BE ADDED FOR FINISHING PURPOSES
- 8 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX. APPLY FINISH AFTER ASSEMBLY.
- 9 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX.
- 10 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.

SHEET 1, ZONE B1 IS:

11	R	647.3917	2			DOUBLER		
F/N	TC	PART NUMBER	.3903	.3902	.3901	DESCRIPTION	MATERIAL	SPECIFICATION
			QTY					
DOCUMENTS EFFECTED:							CHANGE CATEGORY	DER REVIEW REQUIRED
☐ PATTERN ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☒ BOM							☐ MAJOR ☒ MINOR	☐ YES ☒ NO

w/o 146235

don 16/05/13



SECTION AT-AT

SHEET 11, ZONE C1 IS:

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04556

SHEET 1 of 2

DWG NO. 647.3900

REV: C

PREPARED BY D. MEJIA

DATE: 06/10/2014

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: DEFLECTORS

APPROVED BY:

ENGR

MFG

QC

EFF.

NEXT ORDER

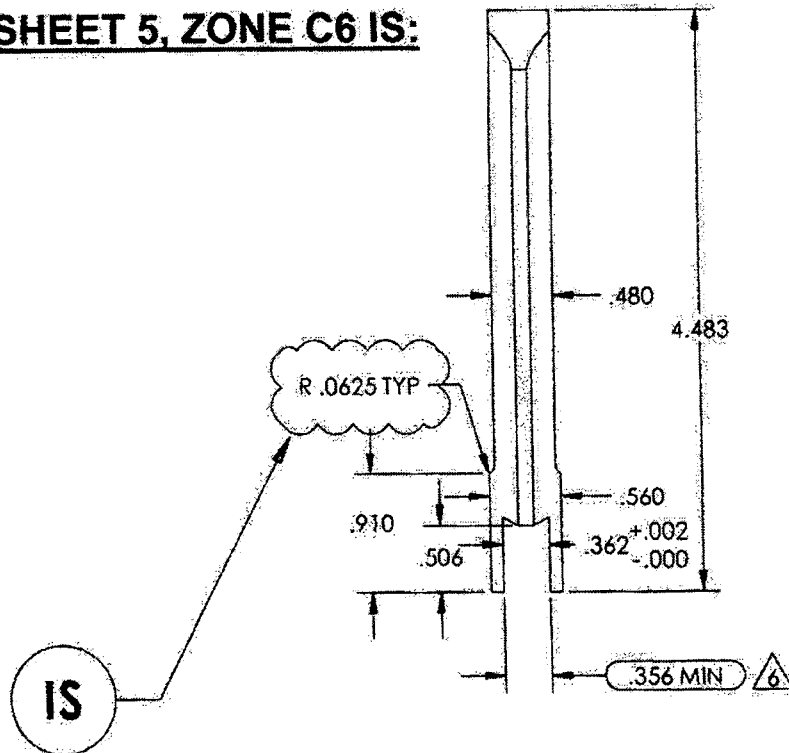
TRANSACTION CODES (TC):
A-ADD
R-REVISE
C-CREATE
D-DELETE

REASON: CHANGED P/N, DIMENSIONS & REVISED BOM

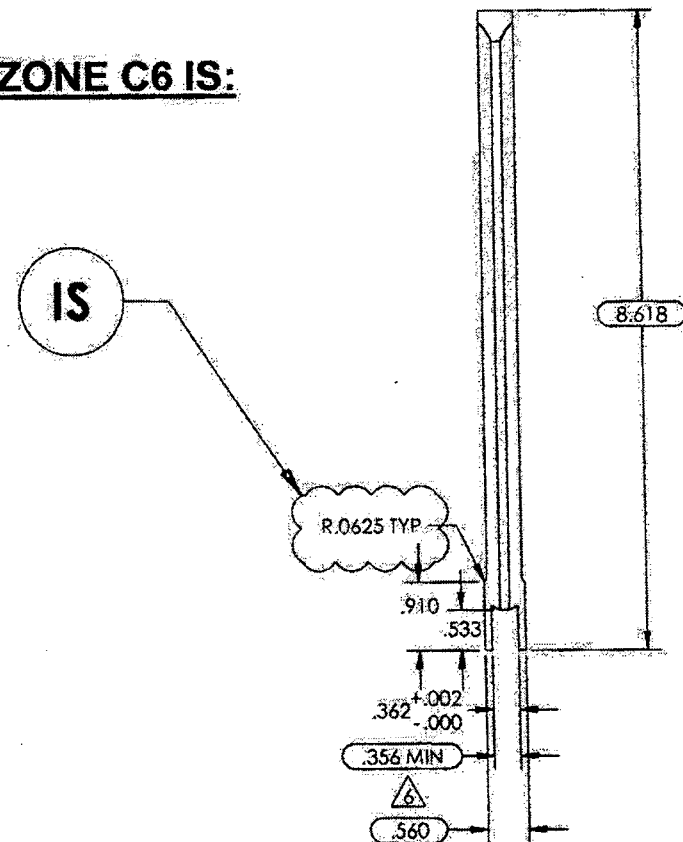
ECR:

D-14-04

SHEET 5, ZONE C6 IS:

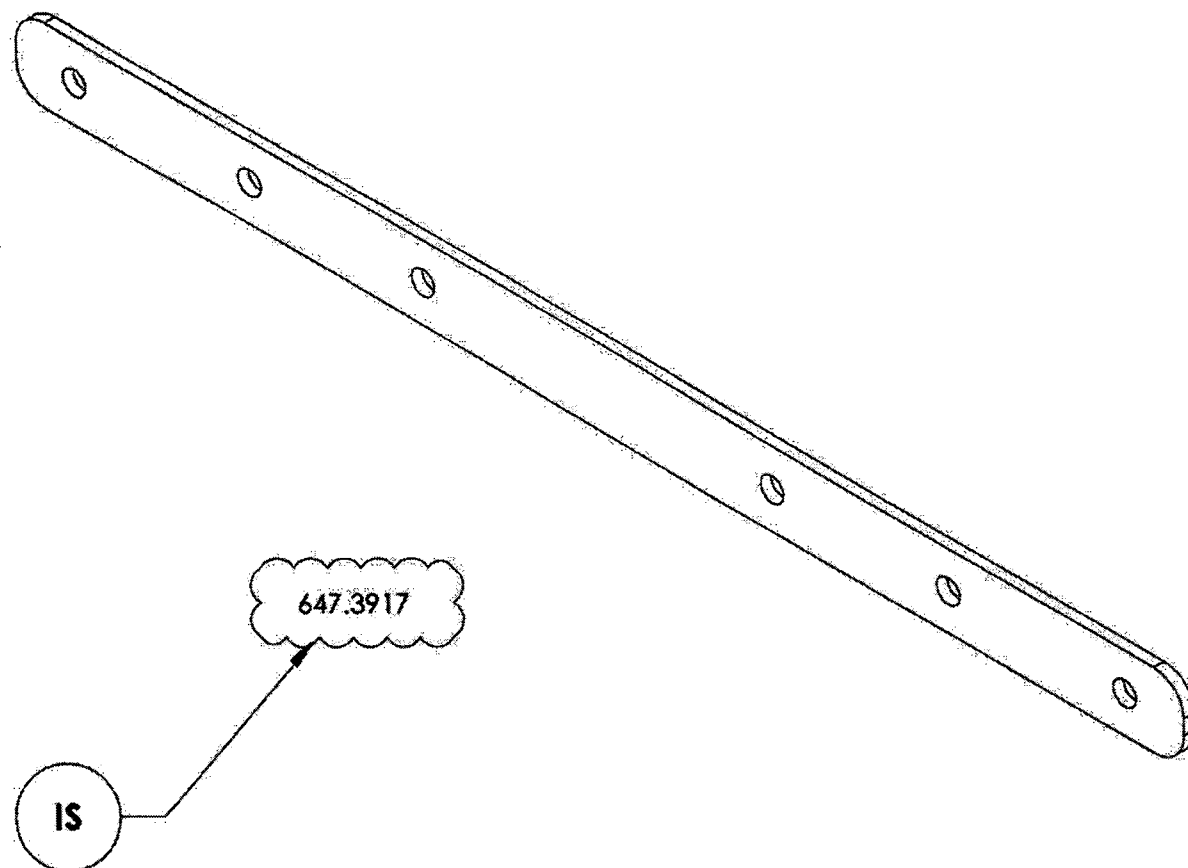


SHEET 6, ZONE C6 IS:



SHEET 1, BOM IS:

11	R	647.3917	2			DOUBLER			
F/N	TC	PART NUMBER	3903	3902	3901	DESCRIPTION	MATERIAL	SPECIFICATION	
		QTY							
DOCUMENTS EFFECTED:							CHANGE CATEGORY		
							DER REVIEW REQUIRED		

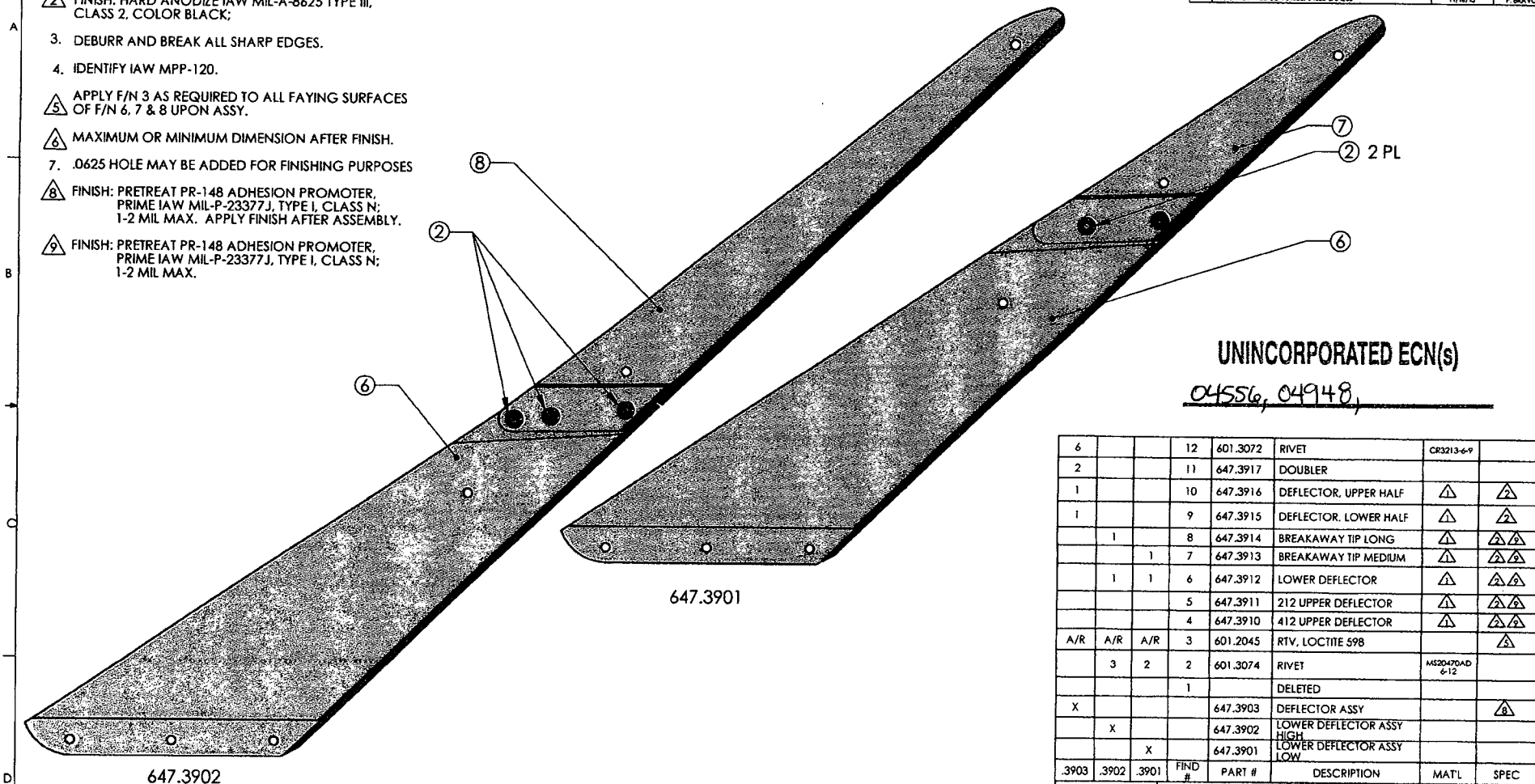
SHEET 12, ZONE B5 IS:

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NOTES:

1. MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
5. APPLY F/N 3 AS REQUIRED TO ALL FAYING SURFACES OF F/N 6, 7 & 8 UPON ASSY.
6. MAXIMUM OR MINIMUM DIMENSION AFTER FINISH.
7. .0625 HOLE MAY BE ADDED FOR FINISHING PURPOSES
8. FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX. APPLY FINISH AFTER ASSEMBLY.
9. FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
REV.	LAST PROTOTYPE RELEASE: PPI		N/C
N/C	INITIAL RELEASE	07/10/09	P. BRAVO
A	INCORPORATED ECH 0284, 0337 & 0351	07/24/12	P. BRAVO
B	INCORPORATED ECH 04025	08/02/13	P. BRAVO
C	INCORPORATED ECH 04028, 04085 & 04250	11/18/13	P. BRAVO



UNINCORPORATED ECN(s)

04556, 04948,

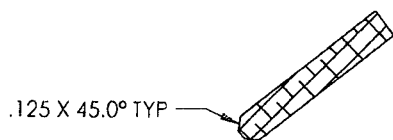
6			12	601.3072	RIVET	CR3213-6-9	
2			11	647.3917	DOUBLER		
1			10	647.3916	DEFLECTOR, UPPER HALF	△	△
1			9	647.3915	DEFLECTOR, LOWER HALF	△	△
	1		8	647.3914	BREAKAWAY TIP LONG	△	△△
		1	7	647.3913	BREAKAWAY TIP MEDIUM	△	△△
	1	1	6	647.3912	LOWER DEFLECTOR	△	△△
			5	647.3911	212 UPPER DEFLECTOR	△	△△
			4	647.3910	412 UPPER DEFLECTOR	△	△△
A/R	A/R	A/R	3	601.2045	RTV, LOCTITE 598		△
	3	2	2	601.3074	RIVET	MS20470AD 6-12	
			1		DELETED		
X				647.3903	DEFLECTOR ASSY		△
	X			647.3902	LOWER DEFLECTOR ASSY HIGH		
		X		647.3901	LOWER DEFLECTOR ASSY LOW		
.3903	.3902	.3901	FIND #	PART #	DESCRIPTION	MATL	SPEC

PARTS LIST			
QTY			
NEXT ASSY (S)			
647.3800			
ORIGINAL DATE: 07-10-09 DRAWN BY: D. SCHUB CHECKED BY: D. SCHUB DRAWING APPROVAL: P. BRAVO CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 ANGLES ± .5°			
SER	CAGE CODE	DWG. NO.	REV.
B	07M26	647.3900	C
SCALE: NONE		SHEET 1 OF 12	

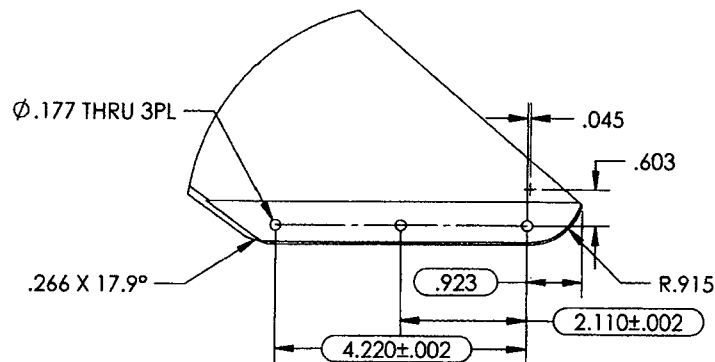
APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

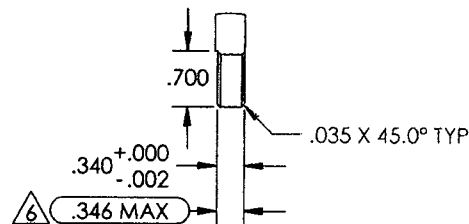
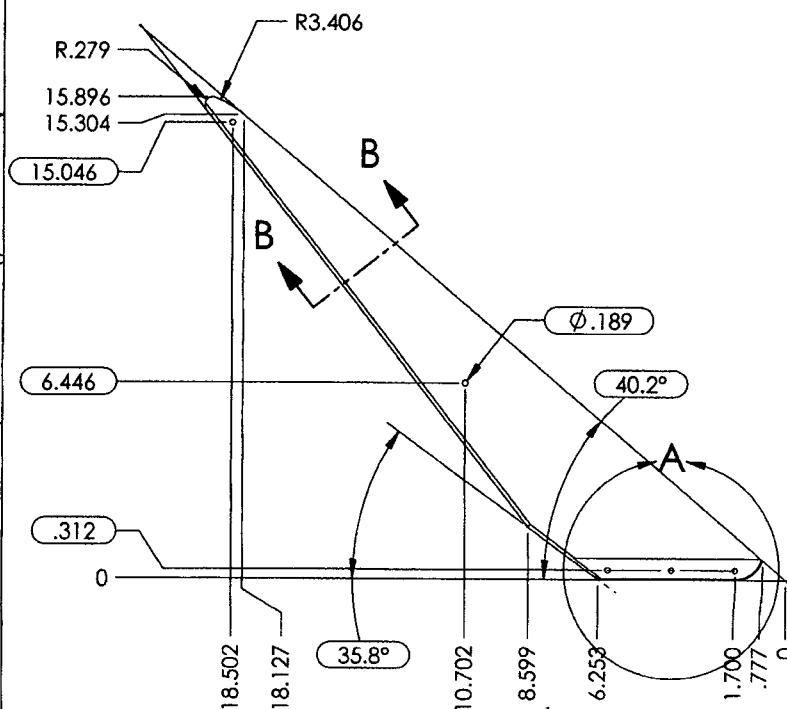
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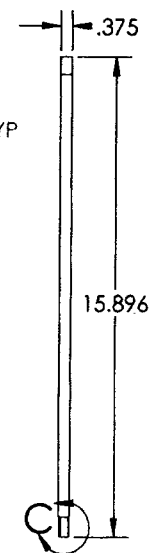
SECTION B-B



DETAIL A



DETAIL C



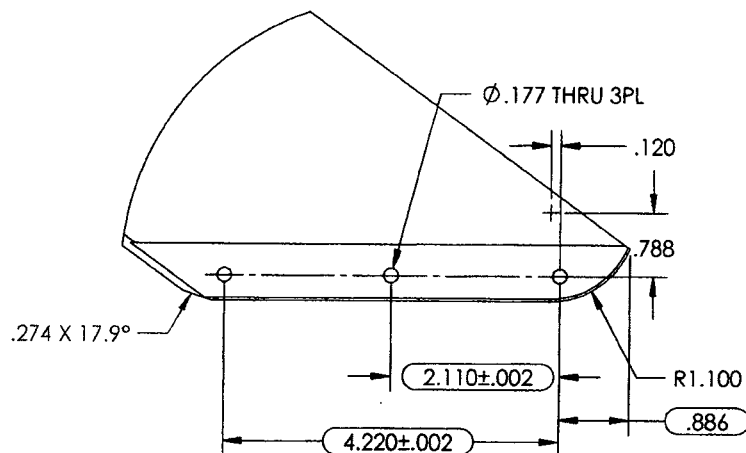
647.3911

ORIGINAL DATE JANUARY 1981 09-10-89		APICAL INDUSTRIES	
DRAWN BY D. SCHUR		2608 TEMPLE HEIGHTS DR.	
DRAWING APPROVAL P. BRAYO		OCEANSIDE, CA. 92056-3512 (760)724-5300	
CONTRACT NO.		DEFLECTORS	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		SIZE CAGE CODE	REV.
TOLERANCES ARE:		B 07M26	C
2 PLACE DECIMALS ±.01		DWG. NO. 647.3900	
3 PLACE DECIMALS ±.005		SCALE NONE	SHEET 2 OF 12
ANGLES ±.5°			

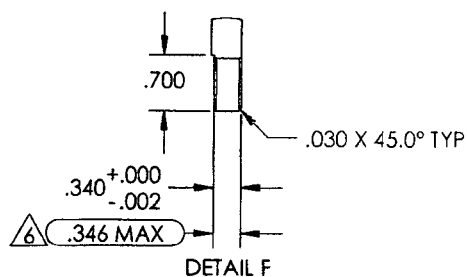
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.125 X 44.9°

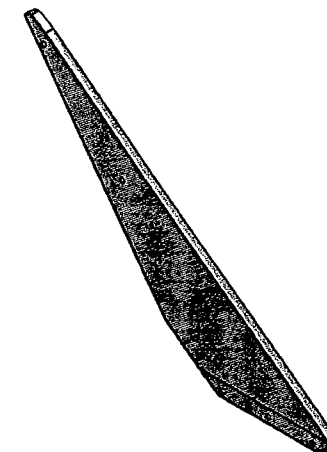
SECTION E-E



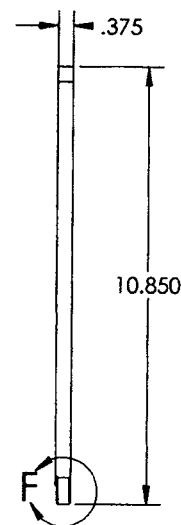
DETAIL D



DETAIL F

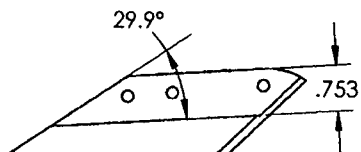


647.3910

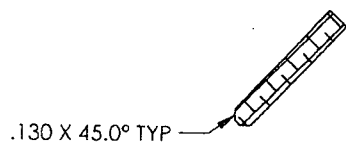


ORIGINAL DATE 10-04-95 09-10-99		APICAL INDUSTRIES	
DRAWN BY D. BUCKUP		2608 TEMPLE HEIGHTS DR.	
DRAWING APPROVAL P. BRAVO		OCEANSIDE, CA. 92056-3512 (760)724-5300	
CONTRACT NO.		DEFLECTORS	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET B	REV. C
CAGE CODE 07M26		DWG. NO. 647.3900	SHEET 3 OF 12
SCALE: NONE			

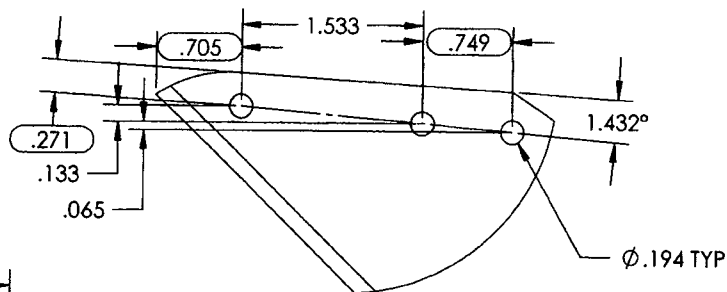
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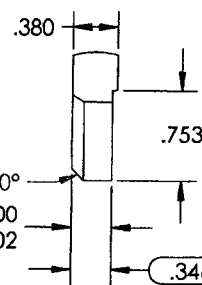
SECTION L-L



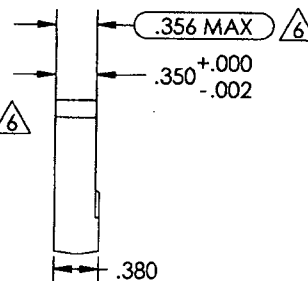
SECTION M-M



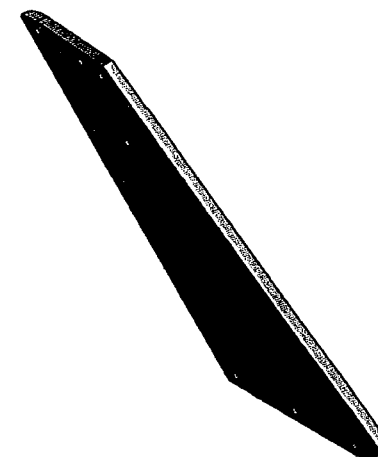
DETAIL H



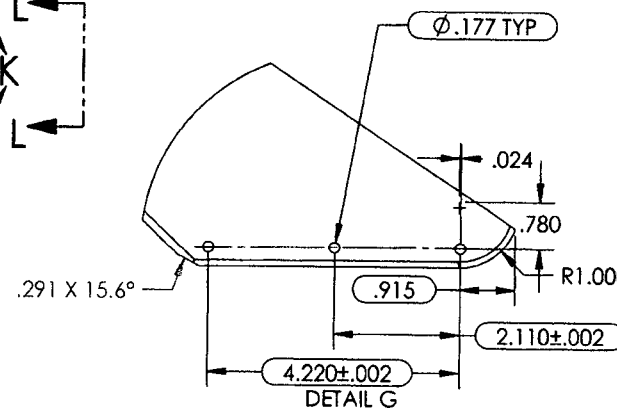
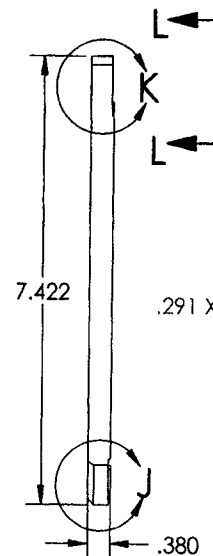
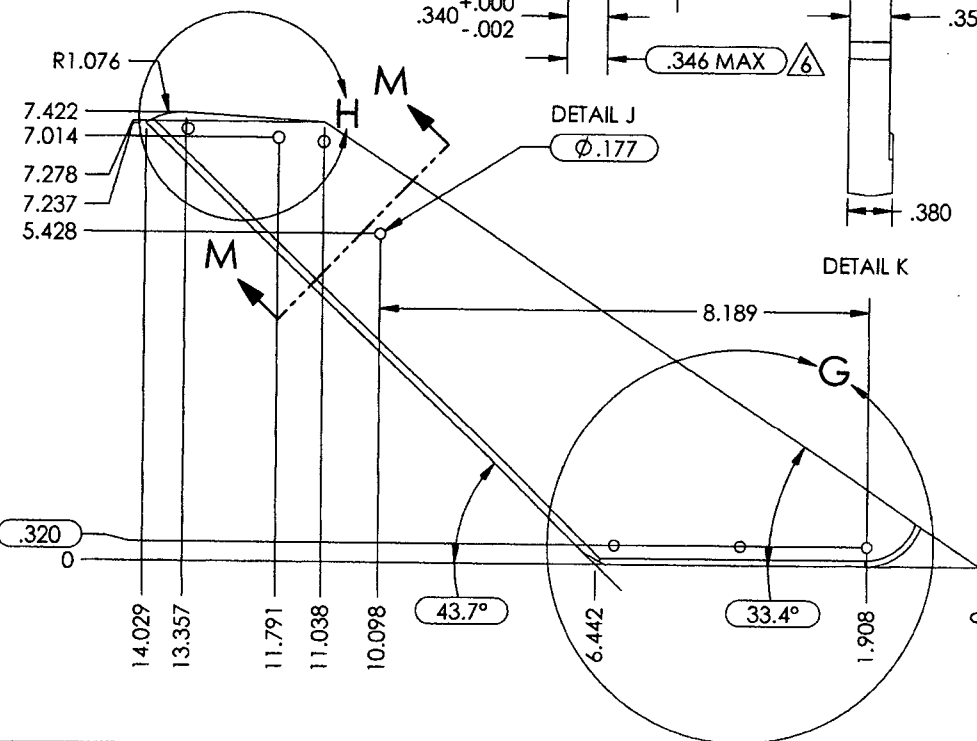
DETAIL J



DETAIL K



647.3912



DETAIL G

ORIGINAL DATE (M/D/Y) 01-10-09		APICAL INDUSTRIES	
DRAWN BY: CHECKER		2608 TEMPLE HEIGHTS DR.	
DESIGNER: D.BARKER		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL: P. BEAVER		DEFLECTORS	
CONTRACT NO.		REV. C	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET 4 OF 12	

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SECTION N-N

.180 X 45.0° TYP

SECTION AD-AD

647.3913

DEFLECTORS

APICAL INDUSTRIES

2608 TEMPLE HEIGHTS DR.

OCEANSIDE, CA. 92056-3512 (760)724-5300

ORIGINAL DATE: 09-10-09
DRAWN BY: TCHREZEP
CHECKED BY: J. BARBER
DRAWING APPROVAL: P. BRAVO
DATE: 09-10-09
CONTRACT NO.:

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
3 PLACE DECIMALS ±.01
2 PLACE DECIMALS ±.005
ANGLES ±.5

SEE CAGE CODE DWG NO. 647.3900
SCALE: NONE
SHEET 5 OF 1

647.3913

 $\triangle 6$

ORIGINAL DATE (M/D/YR) 09-10-09	APICAL INDUSTRIES		
DRAWN BY DJCHER	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300		
DRAWING APPROVAL P. BRAVO 09-10-09	DEFLECTORS		
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			
TOLERANCES ARE:			
1. PLACES DECIMALS 1.001			
2. PLACES DECIMALS 1.005			
ANGLES .5			
SEE	CAGE CODE	DWG NO.	REV
	D7M76	647.390	C
SCALE NONE		1 SHEET 5 OF 11	

1 2 3 4 5 6 7 8

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.175 X 45.0° TYP

SECTION T-T

R.267

8.611

7.876

R3.354

T

T

3.072

.740

.306

1.556

2.306

3.068

.931

R1.671

.418

SECTION AB-AB

SECTION AB-AB

8.618

647.3914

Ø.189 THRU 2PL

Ø.194 THRU 3PL

1.224

.533

.252

0

12.148

11.192

10.597

42.83°

3.875

3.129

3.123

37.1°

.824

0

R.050 TYP

.910

.533

.362^{+.002}_{-.000}

.356 MIN

6

.560

AB

AB

ORIGINAL DATE: 07-10-07
DRAWN BY: D.SCHUR
CHECKED BY: D.BARNER
DRAWING APPROVAL: P. BRAYO
CONTRACT NO.:
UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS ±.01
3 PLACE DECIMALS ±.005
ANGLES ±.5°

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

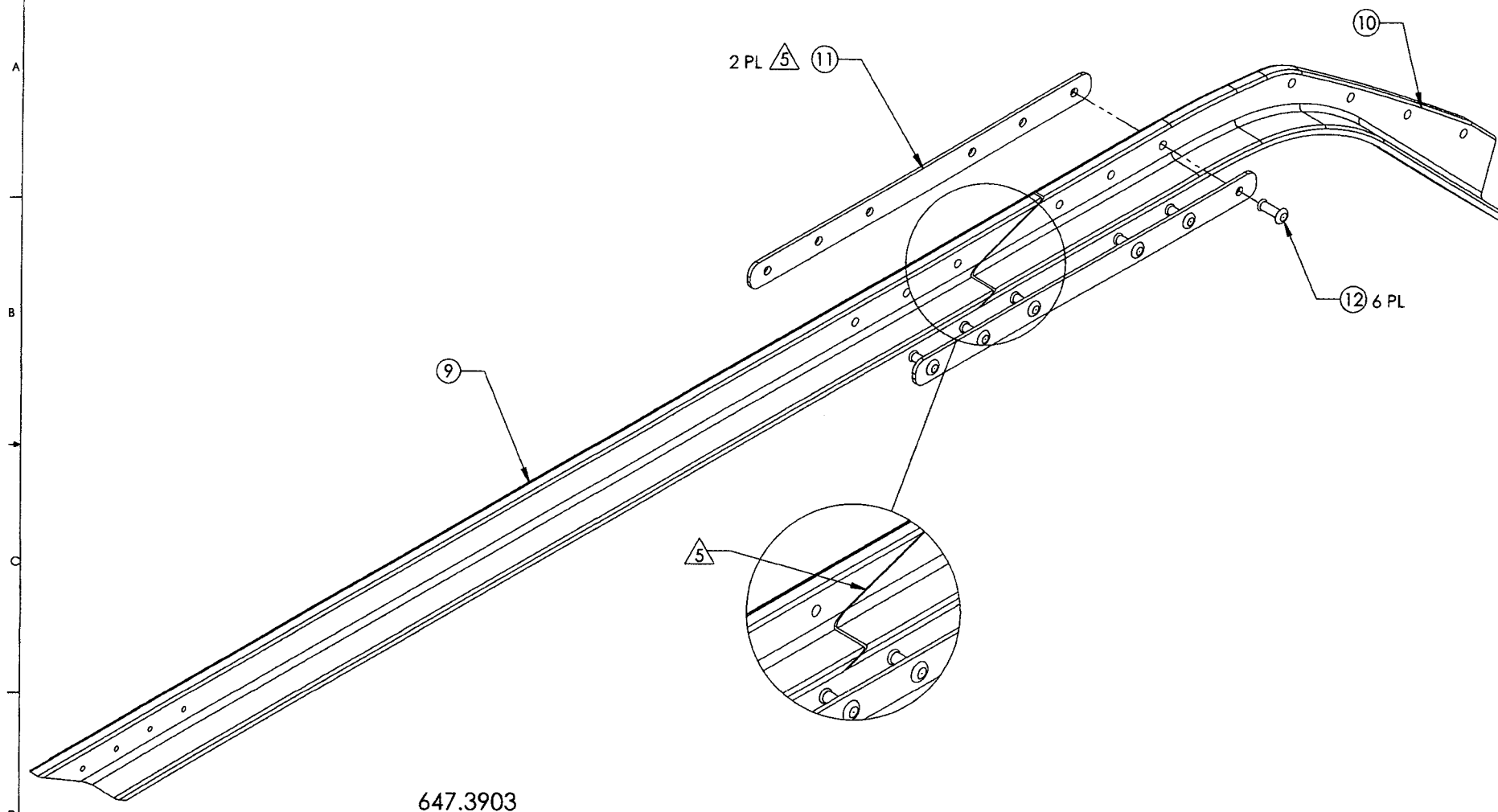
SHEET 6 OF 12

647.3914

ORIGINAL DATE (MCH-DA-12) 09-10-09	APICAL INDUSTRIES		
ISSUED BY D. SCHUR	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-1512 (760)724-5300		
DRAWING APPROVAL P. MAYO			
DATE 09-10-09			
CONTRACT NO.			
DEFLECTORS			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			
SIZE	CAGE CODE	DWG. NO.	REV.
B	07M26	647.3900	C
SCALE NONE		SHEET 6 OF 12	

1 2 3 4 5 6 7 8

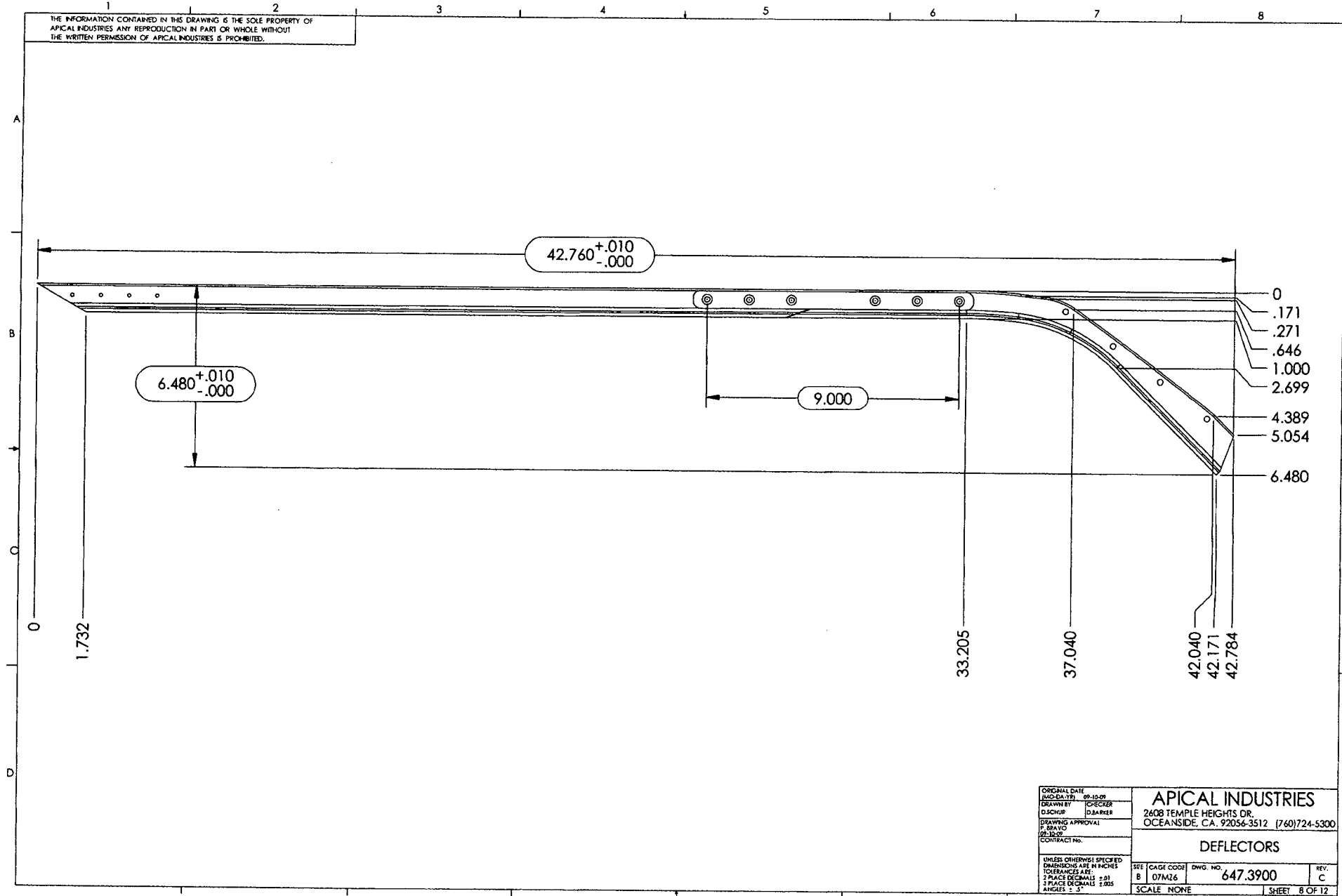
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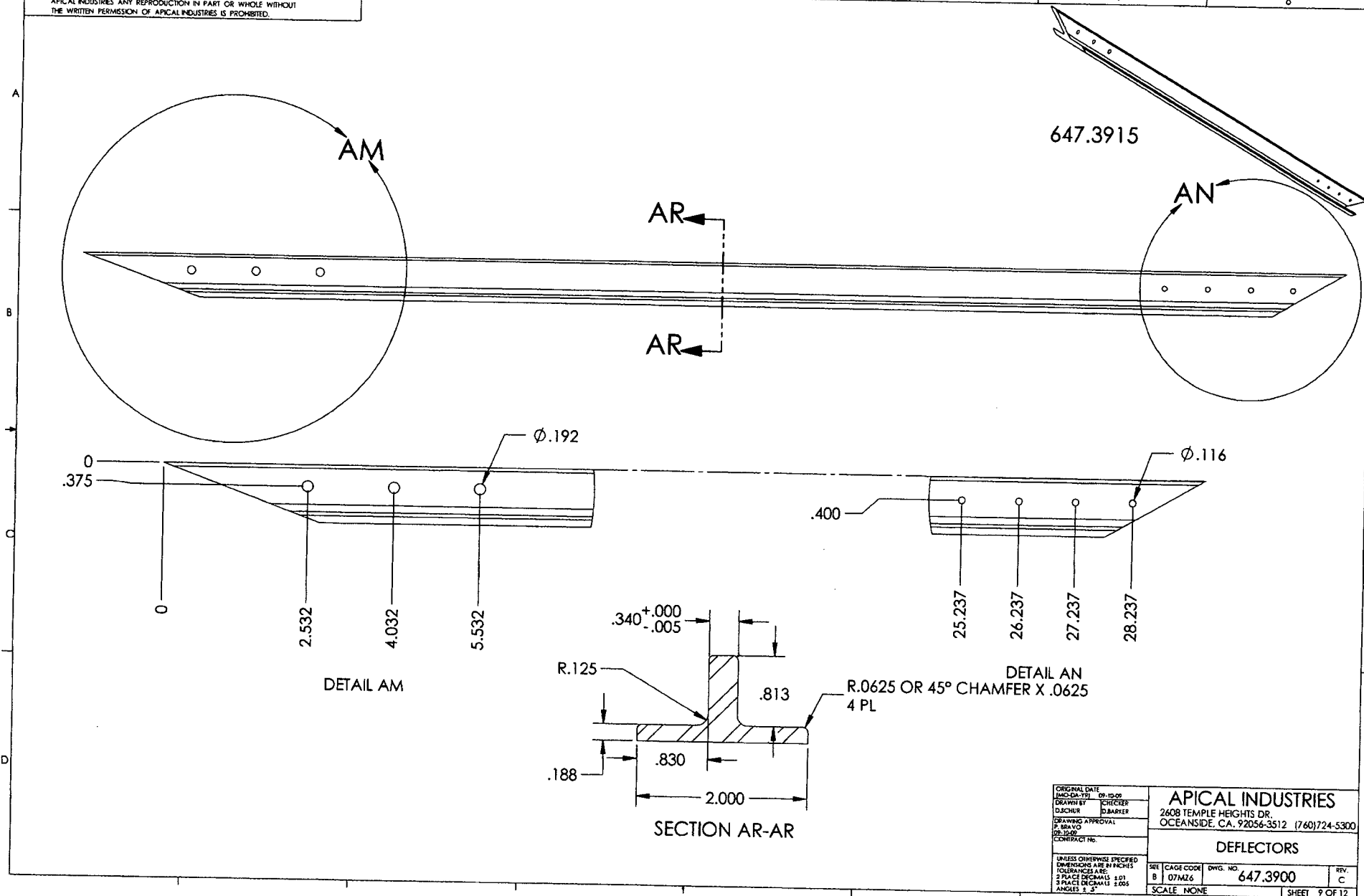
647.3903

ORIGINAL DATE 1/20/01 09:10:09		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300				
DRAWN BY: J. SCHUR						
DRAWING APPROVAL P. BRAYO						
CONTRACT NO.						
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SIZE	CAGE CODE	DWG. NO.	REV.	
			B	07M26	647.3900	C
		SCALE NONE		SHEET 7 OF 12		

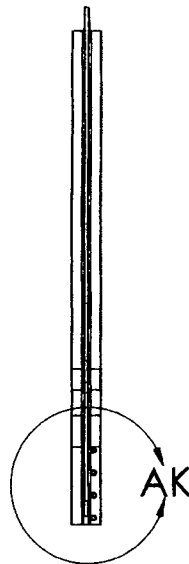
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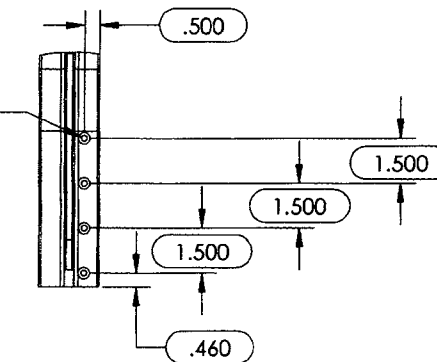
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4X $\varnothing .196 \pm .010$ THRU ALL
✓ $\varnothing .385 \pm .020 \times 100^\circ \pm 1.000^\circ$

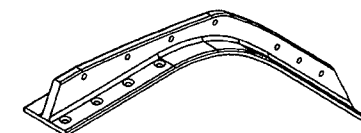


DETAIL AK

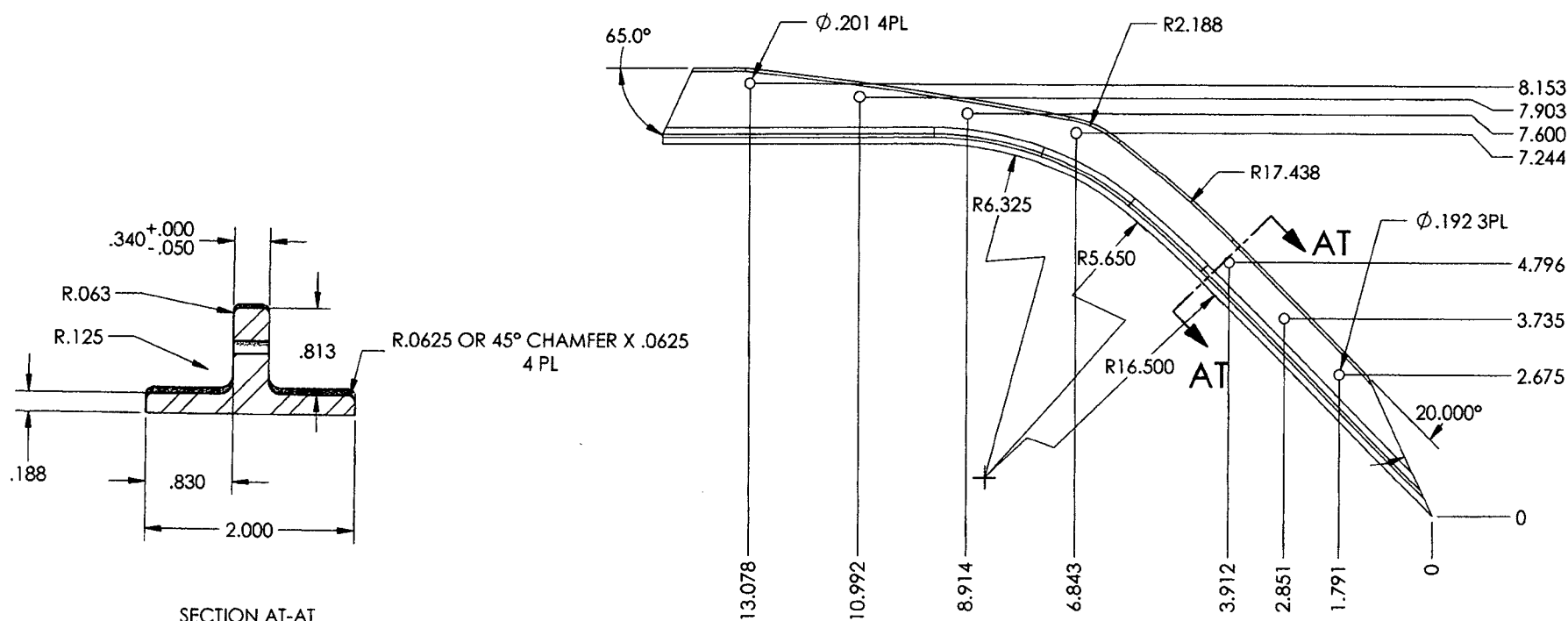
647.3915

ORIGINAL DATE 1MO-04-191 09-10-09		APICAL INDUSTRIES	
DRAWN BY CJCHUP		2608 TEMPLE HEIGHTS DR.	
CHECKED BY D.BARNER		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO		DEFLECTORS	
09-10-09			
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .002$ ANGLES $\pm .5^\circ$		REV. B 07M26 647.3900 C	SCALE NONE SHEET 10 OF 12

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647.3916



ORIGINAL DATE
JMC-DA-197 09-10-09
DRAWN BY
D.SCHUB
CHECKED
D.BARKER
DRAWING APPROVAL
P. BRAVO
09-10-09
CONTRACT NO.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS ±.01
3 PLACE DECIMALS ±.005
ANGLES ±.2°

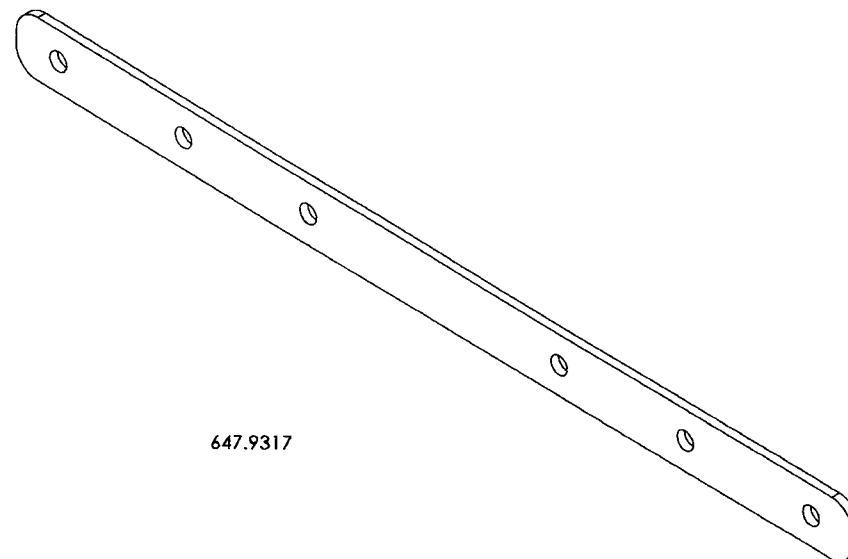
APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

SHEET	CAGE CODE	DWG. NO.	REV.
B	07M126	647.3900	C

SCALE NONE SHEET 11 OF 12

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R.250
4 PL

.625

0

.500

2.000

3.500

6.500

8.000

9.500

10.000

.090

Ø.196
6 PL

ORIGINAL DATE (MO-DA-YR) 09-10-09		APICAL INDUSTRIES	
DRAWN BY D.SCHUR	CHECKER D.BARKER	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAY 09-10-09		DEFLECTORS	
CONTRACT No.		SIZE B	REV. C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		CAGE CODE 07M126	DWG. NO. 647.3900
SCALE NONE		SHEET 12 OF 12	